TRACKS 2006 ATLANTA, GA

Implementing The Tracking Network

breakout ABSTRACT

Abstract No. 12

TITLE

MASSACHUSETTS ENVIRONMENTAL PUBLIC HEALTH TRACKING OF TOTAL TRIHALOMETHANES IN DRINKING WATER, BIRTH DEFECTS, AND LOW BIRTH WEIGHT CASES

TRACK

Network Content

OBJECTIVES

Learning objective: To understand the purpose and utility of linking and analyzing environmental and health outcome data sets as a public health surveillance tool.

SUMMARY

This tracking initiative links data from the Massachusetts Center for Birth Defects Research and Prevention and the Massachusetts Registry of Vital Records (i.e., low birth weight data) for select Massachusetts communities with public water supply (PWS) water quality data provided by the Massachusetts Department of Environmental Protection Water Quality Testing System database. The goal of this project is to track select birth defects and low birth weight and opportunities for exposure to chlorine disinfection by-products, specifically total trihalomethanes (TTHMs), in drinking water. TTHM drinking water levels are assessed quarterly by PWSs at strategic "worse-case" monitoring points throughout the PWS's distribution system (i.e., those locations where the TTHM drinking water levels have appeared relatively high in past sampling events). To assess TTHM maternal exposure during pregnancy, the TTHM drinking water results will be spatially and temporally linked to the maternal residence at time of birth for all live births, select birth defects, and all low birth weight cases between 1999 and 2003 within the PWSs of interest. Odds ratios will be calculated to determine if the prevalence of select birth defects and low birth weight cases are more or less likely based on the categorical exposure level of TTHMs in drinking water during pregnancy.

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